

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A method for exchanging data between at least two stations connected to one another via a distributed bus system, the data being contained in messages sent by the at least two stations via the distributed bus system, the method comprising:

synchronizing a common global time base with an external reference time at a predefinable instant in the at least two stations of the distributed bus system as a function of corresponding correction values and the common global time base, wherein the synchronizing includes:

at least one of the at least two stations: receiving from a source external to the bus system a time signal of the external reference time; based on a content of the time signal, determining a correction target value between the received time signal and the common global time base; and sending the correction target value to other ones of the at least two stations of the distributed bus system; and

the at least two stations of the distributed bus system determining the corresponding correction values as a function of the correction target value; and providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

2. (Original) The method of claim 1, wherein a synchronization of the common global time base with the external reference time is triggerable by comparing the common global time base with the external reference time.

3. (Original) The method of claim 1, wherein the correction target value is sent to the other ones of the at least two stations periodically.

4. (Original) The method of claim 1, wherein the correction target value is sent to the other ones of the at least two stations if the correction target value is other than zero.

5. (Original) The method of claim 1, wherein the correction target value is sent to the other ones of the at least two stations upon a request by one of the other ones of the at least two stations.

6. (Original) The method of claim 1, wherein the correction target value is contained in a separate message sent to the other ones of the at least two stations of the distributed bus system.

7. (Original) The method of claim 1, wherein the correction target value is contained in a test message of the distributed bus system that is sent to the other ones of the at least two stations.

8. (Original) The method of claim 1, wherein the correction target value is contained in test data present in a data message of the distributed bus system that is sent to other ones of the at least two stations.

9. (Previously Presented) The method of claim 1, wherein the corresponding correction values are determined, in the at least two stations of the distributed bus system, using error correction as a function of the correction target value.

10. (Previously Presented) The method of claim 9, wherein the corresponding correction values are determined, in the at least two stations of the distributed bus system, using Byzantine error correction as a function of the correction target value.

11. (Previously Presented) The method of claim 1, wherein the common global time base is synchronized with the external reference time by adding a correction value to the common global time base.

12. (Previously Presented) The method of claim 1, wherein the common global time base is synchronized with the external reference time by multiplying a correction value by the common global time base.

13. (Original) The method of claim 1, wherein the predefinable instant for synchronizing the common global time base with the external reference time is explicitly predefined.

14. (Previously Presented) The method of claim 13, wherein synchronization of the common global time base with the external reference time is triggered by transmitting the corresponding correction values to a synchronization algorithm at an explicitly predefined instant.

15. (Previously Presented) A communication system having at least two stations and a distributed bus system via which the at least two stations are interconnected so that data can be exchanged between the at least two stations, the data being contained in messages that are sendable by the at least two stations via the distributed bus system, the communication system comprising:

a first arrangement to synchronize a common global time base with an external reference time at a predefinable instant in the at least two stations of the distributed bus system as a function of corresponding correction values and the common global time base, wherein the first arrangement to synchronize includes:

a receiving arrangement to receive from a source external to the bus system a time signal of the external reference time at at least one of the at least two stations,

a correction target value determining arrangement to determine based on a content of the time signal, in the at least one of the at least two stations, a correction target value between the received time signal and the common global time base,

a sending arrangement to send the correction target value to other ones of the at least two stations of the distributed bus system, and

a correction value determining arrangement to determine the corresponding correction values in the at least two stations of the distributed bus system, as a function of the correction target value; and

a second arrangement to provide the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

16. (Original) The communication system of claim 15, wherein a synchronization of the common global time base with the external reference time is triggerable by comparing the common global time base with the external reference time.

17. (Previously Presented) A distributed bus system for exchanging data between at least two stations of a communication system, the data being contained in messages sent by the at least two stations, the distributed bus system comprising:

an arrangement operable for use in performing the steps of:

synchronizing a common global time base with an external reference time at a predefinable instant in the at least two stations of the distributed bus system as a function of corresponding correction values and the common global time base, wherein the synchronizing includes:

at least one of the at least two stations: receiving from a source external to the bus system a time signal of the external reference time; based on a content of the time signal, determining a correction target value between the received time signal and the common global time base; and sending the correction target value to other ones of the at least two stations of the distributed bus system; and

the at least two stations of the distributed bus system determining the corresponding correction values as a function of the correction target value; and

providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

18. (Previously Presented) A memory medium for use with a station of at least two stations of a communication system, which is connected to at least one other station of the at least two stations via a distributed bus system to allow exchanging of data, the memory medium comprising:

a storing arrangement to store a computer program for running on a microprocessor of at least one of the at least two stations of a communication system connected to at least another one of the at least two stations via a distributed bus system to allow exchanging of data, the computer program being operable to exchange data between the at least two stations connected to one another via the distributed bus system, the data being contained in messages sent by the at least two stations via the distributed bus system, by performing the steps of:

synchronizing a common global time base with an external reference time at a predefinable instant in the at least two stations of the distributed bus system as a function of corresponding correction values and the common global time base, wherein the step of synchronizing includes:

at least one of the at least two stations: receiving from a source external to the bus system a time signal of the external reference time; based on a content of the time signal, determining a correction target value between the received time signal and the common global time base; and sending the correction target value to other ones of the at least two stations of the distributed bus system; and

the at least two stations of the distributed bus system determining the corresponding correction values as a function of the correction target value; and

providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

19. (Previously Presented) A computer-readable medium having stored thereon a computer program for running on a microprocessor of at least one of the at least two stations of a communication system connected to at least another one of the at least two stations via a distributed bus system to allow exchanging of data, the computer program being operable to perform a method for exchanging data between the at least two stations connected to one another via the distributed bus system, the data being contained in messages sent by the at least two stations via the distributed bus system, the method comprising:

synchronizing a common global time base with an external reference time at a predefinable instant in the at least two stations of the distributed bus system as a function of corresponding correction values and the common global time base, wherein the synchronizing includes:

at least one of the at least two stations: receiving from a source external to the bus system a time signal of the external reference time; based on a content of the time signal, determining a correction target value between the received time signal and the

common global time base; and sending the correction target value to other ones of the at least two stations of the distributed bus system; and
the at least two stations of the distributed bus system determining the corresponding correction values as a function of the correction target value; and
providing the common global time base that is synchronized with the external reference time at the predefinable instant for the at least two stations of the distributed bus system.

20. (Previously Presented) The computer-readable medium of claim 19, wherein the computer program is stored in a memory element.

21. (Previously Presented) The computer-readable medium of claim 19, wherein the computer program is stored in a flash memory.

22. (Original) The communication system of claim 16, wherein the correction target value is sent to the other ones of the at least two stations periodically.

23. (Original) The communication system of claim 16, wherein the correction target value is sent to the other ones of the at least two stations if the correction target value is other than zero.

24. (Original) The communication system of claim 16, wherein the correction target value is sent to the other ones of the at least two stations upon a request by one of the other ones of the at least two stations.

25. (Original) The communication system of claim 16, wherein the correction target value is contained in a separate message sent to the other ones of the at least two stations of the distributed bus system.

26. (Original) The communication system of claim 16, wherein the correction target value is contained in a test message of the distributed bus system that is sent to the other ones of the at least two stations.

27. (Original) The communication system of claim 16, wherein the correction target value is contained in test data present in a data message of the distributed bus system that is sent to other ones of the at least two stations.

28. (Previously Presented) The communication system of claim 16, wherein the corresponding correction values are determined, in the at least two stations of the distributed bus system, using error correction as a function of the correction target value.

29. (Previously Presented) The communication system of claim 28, wherein the corresponding correction values are determined, in the at least two stations of the distributed bus system, using Byzantine error correction as a function of the correction target value.

30. (Previously Presented) The communication system of claim 16, wherein the common global time base is synchronized with the external reference time by adding a correction value to the common global time base.

31. (Previously Presented) The communication system of claim 16, wherein the common global time base is synchronized with the external reference time by multiplying a correction value by the common global time base.

32. (Original) The communication system of claim 16, wherein the predefinable instant for synchronizing the common global time base with the external reference time is explicitly predefined.

33. (Previously Presented) The communication system of claim 32, wherein synchronization of the common global time base with the external reference time is triggered by transmitting the corresponding correction values to a synchronization algorithm at an explicitly predefined instant.

34. (Currently Amended) The memory ~~arrangement~~ medium of claim 18, wherein the memory ~~arrangement~~ medium includes one of a read-only memory, a random-access memory and a flash memory.